

DIGITAL PREDISTORTION FOR POWER AMPLIFIER

ABSTRACT OF THE DISCLOSURE

Apparatus and a corresponding method for predistorting an input signal applied to a radio frequency (RF) power amplifier, to compensate for amplifier distortion at high powers. The RF amplifier input and output signals are continuously monitored and difference signals are generated in an RF phase discriminator. The difference signals are converted to digital form and stored in a lookup table in the form of running averages of an RF amplifier gain compression value and an RF amplifier output phase value for each observed RF input power value. A predistorter module retrieves these values and predistorts the RF amplifier input by way of compensation.